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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,938	12/11/2001	Kenneth Richards	702-011069	4594

7590 12/24/2003  
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EXAMINER

MEHTA, ASHWIN D

ART UNIT PAPER NUMBER

1638

DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/889,938

Applicant(s)

RICHARDS ET AL.

Examiner

Ashwin Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 62-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 62-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \*   c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. The objection to the brief description of Figure 2 is withdrawn, in light of its amendment.
3. The objection to claims 30 and 53 is withdrawn, in light of their cancellation.
4. The rejection of claims 45-52 and 54-57 under 35 U.S.C. 101 is withdrawn, in light of the claim cancellations.
5. The rejection of claims 30-35, 37-43, 45-50, and 52-61 under 35 U.S.C. 112, 1<sup>st</sup> paragraph, is withdrawn in light of the claim cancellations.
6. The rejection of claims 30-61 under 35 U.S.C. 112, 1<sup>st</sup> paragraph, is withdrawn in light of the claim cancellations.

### ***Claim Rejections - 35 USC § 112***

7. Claims 62-64, 66, and 69-72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 62-64, 66, and 69 are rejected for the reasons of record stated in the Office action mailed April 1, 2003, under item 4, concerning the issue of the recitation of the nucleotide sequences of RNA1 of BNYVV, which appeared in claims 32-36, 40-44, 47-51, now cancelled. Applicants traverse the rejection in the papers filed October 1, 2003. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that it is clear from Example 1 that the primer combinations recited therein and used to obtain the BNYVV cDNA clones are specific and well known in the art, as disclosed by Bouzoubaa et al. Applicants argue that one would have no difficulty in obtaining the particular nucleotide sequence of RNA1 of the BNYVV isolate used in the invention (response, paragraph bridging pages 5-6). However, the claims do not mention anything about primers or pcr conditions used to obtain the fragment. Further, limitations of the claims cannot be read into the claims. One cannot assume that the intended isolate is that disclosed in the Bouzoubaa et al. reference.

The other indefinite rejections in the previous Office action are withdrawn, in light of the claim cancellations.

In claims 70 and 71: the claims are indefinite because they do not indicate if the progeny or seed contains the copies of the DNA fragment. If the transgenic sugar beet plant of claim 68 were crossed to another sugar beet that has BNYVV resistance conferred by some other means, then the progeny can be BNYVV-resistant but not contain the DNA fragments. It is suggested that the claims be amended by indicating that the progeny and seed contain the copies of the DNA fragments.

In claims 70-72: it is not clear what the claims are drawn to. The claims first state, "The transgenic sugar beet plant of claim 68". However, the claims then go on to discuss progeny, seeds, or vegetative parts. If it is Applicants' intention for claims 70-72 to be directed to progeny, seeds, and vegetatively reproducible structures of the transgenic plant of claim 68, the following amendments are suggested: for claim 70, replace the article "The" in line 1 with -- Progeny of the--, and the term --said-- be inserted in line 2 before "progeny". It is suggested that claims 71 and 72 be amended accordingly.

***Claim Rejections - 35 USC § 103***

8. Claims 62-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baulcombe (Plant Cell, 1996, Vol. 8, pages 1833-1844) in combination with Saito et al. (Arch. Virol., 1996, Vol. 141, pages 2163-2175), and Hall et al. (Nature Biotech., 1996, Vol. 14, pages 1133-1138), for the reasons of record stated in the Office action mailed April 1, 2003 under item 7 for claims 30-61. Applicants traverse the rejection in the papers filed October 1, 2003. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that the novel critical feature of the invention lies in the use of DNA fragments that are truncated at the 3' end and which no longer contain the replicase-portion of the replication-associated domains. Applicants argue that one skilled in the art is aware that there are three distinct RNA1 open reading frames, and that nucleotide 153 to 3258 is missing the replicase portion (response, paragraph bridging pages 6-7). However, the specification does not include any discussion that the critical feature of the invention is the deletion of the replicase domain of the BNYVV replicase. The specification does not discuss the different domains of

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BNYVV replicases. Applicants argue that the title of Example one states that the 3' truncated fragment is missing the replicase portion (response, paragraph bridging pages 6-7). However, the title of Example 1 only indicates that the BNYVV replicase is truncated. It does not state that the fragment is missing the replicase portion. The sequence of nucleotides 153 to 3258 of RNA1, as recited in the claims, can be that from any BNYVV isolate. The claims do not recite any particular nucleotide sequence. The sequence of nucleotides 153-3258 of all BNYVV isolates is not identical. For the reasons discussed in the previous Office action, the choice of BNYVV RNA1 sequences to be used in the claimed method amount to an optimization of process parameters. Applicants argue that the cited references do not teach the use of truncated fragments that "mainly" contain the helicase domain, and not the replicase domain (response, page 7, last paragraph). However, the claims do not state that the replicase domain is missing. Further, the DNA sequences encoding the BNYVV RNA1 sequences in claims 65, 67, 68, and 70-72 contain the sequences encoding the replicase domain. See In re Lindner, 173 USPQ 356 (CCPA 1972) and In re Grasselli, 218 USPQ 769 (Fed. Cir. 1983) which teach that the evidence of nonobviousness should be commensurate with the scope of the claims.

### *Summary*

9. Claims 62-72 are rejected.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this or earlier communications from the examiner should be directed to Ashwin Mehta, whose telephone number is 703-306-4540. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 and 703-872-9306 for regular communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

December 17, 2003



Ashwin D. Mehta, Ph.D.  
Primary Examiner  
Art Unit 1638